Developing entrepreneurship through Design Thinking: a new frontier for adult education

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Entrepreneurship; Design Thinking; Entrepreneurship Education.

Abstract
This essay revolves around the construct of entrepreneurship (Moberg et al., 2014) as a key category to generate value at economic, cultural and social levels. Through a terminological survey, designed to bring order to the vast galaxy of definitions (Erkkilä, 2000; QAA, 2012), we shall will take a closer look at the dimension of entrepreneurship education (Lackéus, 2015) in its links with the educational process at university level. In this framework, the Design Thinking method (Dunne & Martin, 2006) fits as a common approach in the international arena for the construction of programmes targeting entrepreneurship. If many experiences currently follow a positioning that is mostly extra-curricular, future prospects are directed towards an 'embedded' setting capable of making teachers the central nucleus for skills development (European Commission, 2014; Lackéus, 2015).

1. The construct of entrepreneurship

The theme of entrepreneurship education has been hotly debated in the educational field for some time. Some positions strongly criticize an alleged excessively economic shift in education, seen primarily as the result of a vested interest of certain groups (Sin & Neave, 2016). But just what is meant by the category of entrepreneurship?

> "Entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social" (Moberg, Baslund, Fosse, Hoffman & Junge, 2014, p. 14).

This definition, drawn up by the Danish Foundation for Entrepreneurship, places the concept of value in a new light for studies on education in adulthood. Moberg et al. (2014) argue that the result of action on opportunities and ideas aims not only at generating profit, but also an improvement in the social and cultural conditions of the context. Developing tools to create value, then, means educating people, citizens and workers who can innovate their surroundings, making a positive contribution and responding to emerging needs.
In the wake of this, other approaches and movements, largely also linked to pathways of entrepreneurial education, have developed in recent decades. The foundations naturally refer to the pedagogy of John Dewey (Dewey 1951, 1963, 2014), later taken up by approaches such as Kolb's Experiential Learning (Kolb 1984), Lave & Wenger's Situated Learning (Lave & Wenger 1991) up to the recent developments of Service Learning (Jacoby, 2015).
The many roads to arrive at dealing with this dimension have generated a huge range of definitions. The two most frequent come from the Quality Assurance Agency for Higher Education in the United Kingdom which distinguishes between:

> Enterprise Education, defined as the process of acquiring skills in idea generation;
>
> Entrepreneurship Education, namely, those paths designed to provide knowledge, skills and the aptitude necessary to apply these abilities in the real-world context of creating a new business (QAA, 2012, p. 2).

Of different origin, instead, is the term used in the United States, which speaks exclusively of Entrepreneurship

Education (Erkkilä , 2000). Other researchers have used the concept of Enterprise and Entrepreneurship Education which includes both points of view but may perhaps prove difficult to use in practice. In this discussion, Erkkilä proposed to combine the terms in Entrepreneurial Education (Erkkilä ,2000) to contain both of them. Instead, in northern Europe, most of the talk is about Entrepreneurial Learning, emphasizing the learning dimension and development within the education process (Lackéus, 2015). Aware of this vast literature, definitely far from unequivocal at a terminological level, here we have chosen to use the American meaning since, given its inclusiveness, is more able to express the complexity of the sphere. In fact, in view of the very recent spread of the theme to the Italian teaching-educational context (Piazza, 2015; Morselli, 2016; Costa & Strano 2018) we have opted for an interpretation open to both the vast field of the creation of start-ups, and the fledgling one of services for employability and enterprise (Yorke, 2006; Moreland, 2006; Boffo, 2018; Boffo & Fedeli, 2018).

2. Teaching 'about', teaching 'for', teaching 'through' entrepreneurship

Instead, what deserves a specific illustration is the aspect of teaching, the element through which the real forms of implementing projects and programmes are substantiated. In this regard, Martin Lackéus identifies three approaches:

- *teaching about,*
- *teaching for,*
- *teaching through (Lackéus, 2015, p. 10).*

As the author makes abundantly clear:

- "Teaching 'about' entrepreneurship means a content-laden and theoretical approach aiming to give a general understanding of the phenomenon. It is the most common approach in higher education institutions (Mwasalwiba, 2010).
- Teaching 'for' entrepreneurship means an occupationally oriented approach aiming at giving budding entrepreneurs the requisite knowledge and skills.
- Teaching 'through' means a process based and often experiential approach where students go through an actual entrepreneurial learning process (Kyrö, 2005). This approach often leans on the wider definition of entrepreneurship and can be integrated into other subjects in general education, connecting entrepreneurial characteristics, processes and experiences to the core subject." (Lackéus, 2015, p. 10)

What seems of interest in the third educational level is the expanded vision of the concept of entrepreneurship, which goes beyond knowledge ('about') or knowledge and skills ('for'). In fact, the last level is substantiated in an "embedded approach of teaching 'through' entrepreneurship [that] can be relevant to all students and on all levels of education." (Lackéus, 2015, p. 10) Taking into consideration the opportunity to build an embedded approach (Federighi, 2009; Boffo, 2018) may have potential spin-offs in the dissemination of an approach to entrepreneurship for each scope and level of study. This is a procedural vision in which entrepreneurship education does not exclusively target venture creation, but is open to all areas of work, citizenship, society, of the whole of life.

On this trajectory lies the work of Martin Lackéus, who has developed a unified and progressive model to incorporate the multiple tasks in a structured system, including multiple phases with different objectives.

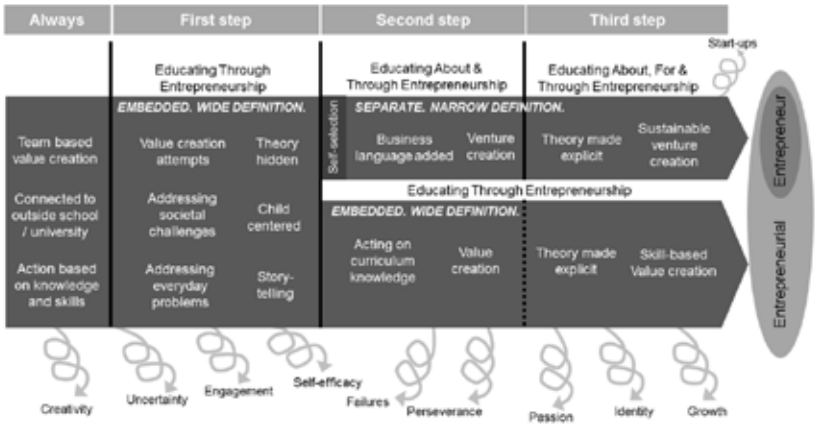

Figure 2 - A unified progressive model to develop entrepreneurship (Lackéus 2015: 25).

A further model has been developed in recent years in work by the European Commission, resulting in the project EntreComp: The Entrepreneurship Competence Framework (Bacigalupo, Kampylis, Punie & Van den Brande, 2016; McCallum, Wiecht, McMullan & Price, 2018). What does this consist of?

> "EntreComp is a comprehensive, flexible and multi-purpose reference framework designed to help you understand what is meant by entrepreneurship as a key competence for lifelong learning and to be able to use this in your work. It is intended to support and inspire actions to improve the entrepreneurial capacity of European citizens and organisations and was launched in 2016 as part of the New Skills Agenda for Europe" (McCallum, Wiecht, McMullan & Price 2018, p. 13).

Figure 3 - The three areas of the EntreComp Entrepreneurship Competence Framework (McCallum, Wiecht, McMullan & Price, 2018, p. 13).

On a first, more general level, three main areas are identified:

- *Ideas & Opportunities;*
- *Resources;*
- *Into Action.*

The fifteen petals which describe these areas represent the skills through which to substantiate the concept of entrepreneurship and are given here in detail:

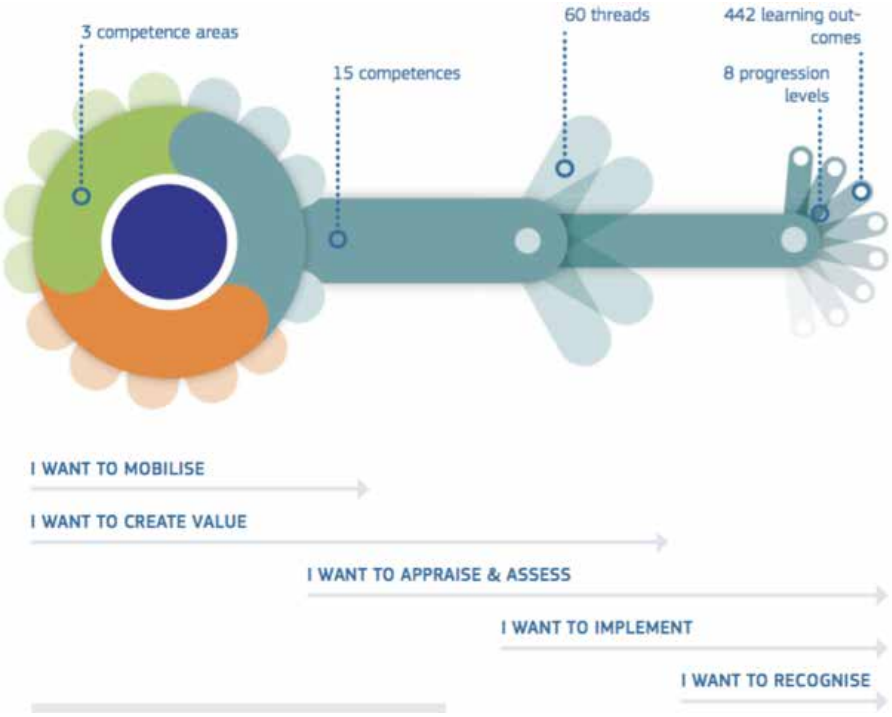

Figure 4 - Overall Description of the EntreComp framework (McCallum, Wiecht, McMullan & Price, 2018, p. 21).

The model can then be further expanded, going on to identify, for each skill, the specific behaviour that can identify and lead to real possession of the capacity to enact the skill. For example, the items that make up creativity include being open and curious, the development of ideas, the definition of problems, the designing of value and being innovative. In further depth, each of these is associated with learning outcomes through eight progressive levels, from the basic one, to intermediate, advanced, and expert. As McCallum et al. have underlined: "...this sense of progression is important when considering the development of a learner over time, the different starting points of learners or exploring to create a coherent entrepreneurship education pathway..." (McCallum, Wiecht, McMullan & Price 2018, p. 18). An overall look at the framework therefore allows us to monitor how it is possible to progressively go into depth in defining the elements that make up entrepreneurship.

3. Design Thinking as a method for Entrepreneurship Education

Design Thinking came originally from industry. The term "design", in fact, can at first impact mean many things: creating artefacts, planning new industrial features; it may relate to problem-solving activities or represent a way of thinking, reflecting and creating meaning. In fact, it has spread throughout managerial contexts in order to develop creative solutions linked to the needs of both users and customers (Buchanan, 1992; Dunne & Martin 2006; Liedtka & Ogilvie, 2014).

There are many definitions and descriptions of what the Design Thinking method represents today. Among these we can quote the definition of David Kelley of the Institute of Design at Stanford University:

> "...it's a method for how to come up with ideas. These are not just ideas, but breakthrough ideas that are new to the world, especially with respect to complex projects, complex problems. That's when you really need multidisciplinary teams ... and you really need to build prototypes and try them out with users" (Camacho, 2016)

Some researchers within the European project D-think, have painstakingly explained the strong correlation between entrepreneurship and Design Thinking (Nielsen & Stovang, 2015):

The entrepreneurial spirit and mentality are increasingly important in working life. The help to achieve objectives and to try new things. There are many similarities between Design Thinking and entrepreneurship. In addition to creativity and innovation, there are also other points in common between Design thinking and the entrepreneurial spirit, namely:

- The focus on the creative resolution of problems;
- The search for new ideas and the recognition of opportunities in the environment;
- The focus on addressing uncertainty.

In some way, entrepreneurs are applying Design Thinking, even if unconsciously, when they move through a creative process of problem-solving, or when seeking new opportunities and challenges. By going more deeply into the dynamics and power of Design thinking as a process, and of its tools, entrepreneurs can improve in engaging in and facilitating innovation processes (Tschimmel, Loyens, Soares & Oraviita 2015, p. 15).

The concept, modelled by Stanford University and then taken up by many players around the world, can be represented by the following figure:

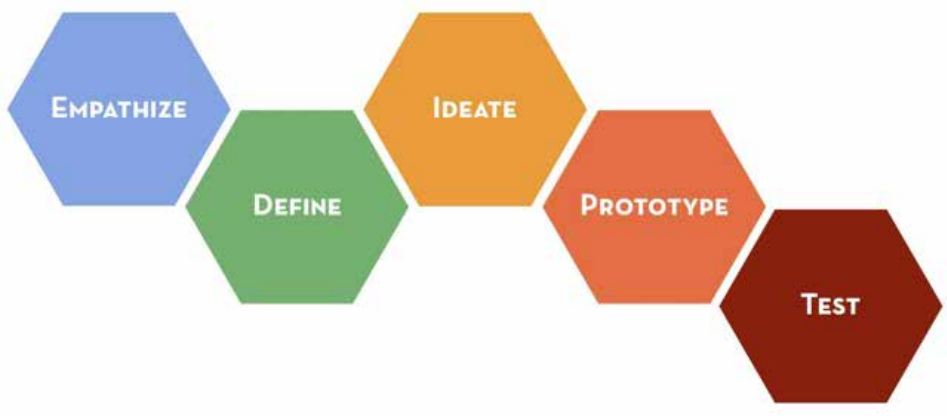

Figure 5 - Model of Design Thinking developed by the d.school of Stanford (htttps://dschool.stanford.edu)

This division consists of five phases defined as follows (Nielsen Stovang, 2015):

- Emphatize, focuses on understanding the needs of the persons involved, by actively watching and interacting with the context identifying oneself with the experiences of the participants;
- Define, concerns the adoption of a point of view from the empirical results that have emerged, to have a clear problem in front which represents the challenge to be resolved;
- Ideate, intends to explore a wide range of innovative solutions, through targeted tools, to subsequently convey a keystone idea;
- Prototype, seeks to transform ideas into a concrete form, giving substance to the characterization of the product/service in a way that is increasingly specific so as to also allow users to interact with them for better empathy;
- Test, that phase in which feedback is sought from users to improve the prototype and solution identified and secondly to bring out new needs that require a response.

The theme which remains open however, behind all the methods and projects, involves the effectiveness and impact of these programmes on skills and on the creation of new business projects (Fayolle, Gailly & Lassas-Clerc, 2006). We are not only questioning whether the field of entrepreneurship is becoming vaster, but whether there are any signs of growth and progress also with respect to the impactful challenges it invokes. If the last decade has shown a progressive definition of the debate, as we have also observed in the terminological

dimension (QAA, 2012), the scientific community still has a long way to go on the research side (Fayolle, 2007; Gibb, 2007; Fayolle & Gailly, 2008; Dal, Elo, Leffler, Svedberg & Westerberg, 2016). However, we still have to dig deep regarding the factors preceding success (or failure) or the predictive items (Bruyat & Julien, 2000).

4. Conclusions

The contribution which entrepreneurship education can offer the future of adult education relates not only to the construction of programmes and pathways, but the adoption of a new educational paradigm. As stated in the document of the European Commission Entrepreneurship Education: A Guide for Educators (2014): "teachers cannot teach how to be entrepreneurial without themselves being entrepreneurial" (European Commission, 2014, p. 10). The point of view is therefore turned on its head. It is not a question of merely defining a new method, or an innovative way of conceiving teaching. Entrepreneurship education calls into question the latest roots of education, its sense of category at the service of the social transformation of the world. Dealing with innovation today, in such a rapidly-changing context (Ito & Howe, 2017), is to prepare the future of the human community through tools, templates and projects that can respond quickly and effectively to the challenges of history. And it is here that education looks to tomorrow, in a new location at the centre of the changes in the world of work and society as a whole.

Notes

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[2] By service learning is meant "a form of experiential Education in which the students engage in activities that address human and community needs together with structured opportunities for reflection designed to achieve desired outcomes. Service Learning is the permanent landscape of Higher Education" (Jacoby, 2015).

[3] David Kelley is the founder of IDEO, an agency of design and innovation which operates worldwide. He also founded the Hasso Plattner Institute of Design at Stanford University, known as "d.school". His main contributions have focused on the methodologies of 'human-centred design' and 'design thinking'.

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